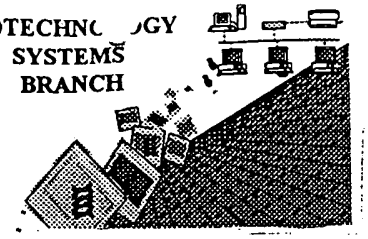
5/17

BIOTECHNOLOGY SYSTEMS BRANCH



5

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/909,566B
Source: OIPE
Date Processed by STIC: 5-22-02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, **PLEASE** USE THE **CHECKER VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
http://www.uspto.gov/web/offices/pac/checker

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<**http://www.uspto.gov/ebc/efs/downloads/documents.htm**> , **EFS Submission User Manual** - ePAVE)
2. **U.S. Postal Service:** U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. **Hand Carry directly to:**
   U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
   Or
   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. **Federal Express, United Parcel Service, or other delivery service to:** U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Does Not Comply
Corrected Diskette Needed
see page 6

OIPE

RAW SEQUENCE LISTING DATE: 05/22/2002
PATENT APPLICATION: US/09/909,566B TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq lst.txt
Output Set: N:\CRF3\05222002\I909566B.raw

3 <110> APPLICANT: Cahoon, Edgar B
5 <120> TITLE OF INVENTION: A Cytochrome P450 enzyme associated with the synthesis of delta-
6 12-epoxy fatty acids
8 <130> FILE REFERENCE: BB1465 US NA
C--> 10 **<140> CURRENT APPLICATION NUMBER: US/09/909,566B**
C--> 11 **<141> CURRENT FILING DATE: 2002-05-10**
13 <150> PRIOR APPLICATION NUMBER: 60/219833
14 <151> PRIOR FILING DATE: 2000-07-21
16 <160> NUMBER OF SEQ ID NOS: 7
18 <170> SOFTWARE: Microsoft Office 97
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 1733
22 <212> TYPE: DNA
23 <213> ORGANISM: Euphorbia lagascae
25 <400> SEQUENCE: 1
26 gcataaaagg aaaatggagc agaaaaatct ctcttttccg agcattttaa taagttttct 60
27 gcttgtttta atcttagtag tagtcatgag gttgtggaag aaacagaatc cacctccagg 120
28 gccatggaag tttcctatca taggtaatct tcctcattta ttactcactt ctgatctagg 180
29 ccatgaacgt tttagagcct tggctcaaat ttatggacct gttatgagtc ttcaaattgg 240
30 ccaagtttca gctgttgtca tttcttcagc tgaagcagcc aaagaggtta tgaaaactca 300
31 ggctgatgcc ttcgcccaac gccctatcgt cttggacgca cagattgtgt tttataatcg 360
32 gaaagatgtc ttgtttgctt catatggaga tcactggagg cagatgaaga aaatttggat 420
33 acttgaattt ctgagtgcca aaaaagttca atcctccagg ttaatccgag aggaagaaat 480
34 ggaggatgcc atcacattcc tccgttcgaa agccggatct ccggtcaata ttacaaagat 540
35 catttatggc attataattt cgatcatgat aagaacatcc gttggtaatt gtaagcaaaa 600
36 agaaagattg ctgagtgttg ccgatgcagt caatgaggca gcgacgagtt ttggcaccgc 660
37 agacgctttt ccgacgtgga aattacttca ctatatcatt ggagctgagt caaaacccag 720
38 gcgtttgcat caggagattg acgatatact tgaagagatt cttaatgaac acaaagccaa 780
39 taagcctttt gaagcggata acttaatgga tgttctattg aatcttcaaa aaaatggaaa 840
40 cgttccagtg ccagtgacaa acgaaagcat caaagcatcc gttttgcaaa tgtttactgc 900
41 cgggagcgaa acaacttcga aagctacaga atgggtaatg gcagagctga tgaaaaatcc 960
42 aactgaacta agaaaagcac aagaagaagt tagacaagta tttggtgaaa tgggaaaagt 1020
43 tgatgaatca agatttcatg atttgaaatt cttcaagtta gtggttaaag aaactctaag 1080
44 attacatcct ccggttgtct tgattccgag ggagtgtaga gaaacaacac gaattgatgg 1140
45 atatgaaatt catccgaaca ctcgaattgt tgtgaatgct tgggcgatag gaagagatcc 1200
46 taatacttgg tcggaacctg gaaagtttaa cccagaaagg tttaaagatt gtgcaattga 1260
47 ttataaaggg acgacatttg aactggtacc atttggtgca ggaaaaagaa tatgtcctgg 1320
48 cattacttca gctattacca atttggagta tgtcattata aatctattat atcattttaa 1380
49 ttgggaactg gccgatggaa ttacacctca aacacttgat atgactgaag ctattggcgg 1440
50 tgctctcagg aaaaaaatag atcttaagtt gattcctatt ccatatcaag ttagcttagg 1500
51 ctcaaatatt tcttgattac ataggagggt tgaaatatat ataataaact ttaattaacg 1560
52 atgttctaat atggtttggg tgagttataa taggttttcc accgatcata taagtagcct 1620
53 tctttgatgg atgggttaga ttataatgag ttgtgggttg gatttttaga tgggttaaat 1680

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002
TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq lst.txt
Output Set: N:\CRF3\05222002\I909566B.raw

54 gatttggatg gataataata aattgaaatg ttttcttttt caaatccgaa aaa 1733
57 <210> SEQ ID NO: 2
58 <211> LENGTH: 500
59 <212> TYPE: PRT
60 <213> ORGANISM: Euphorbia lagascae
62 <400> SEQUENCE: 2
63 Met Glu Gln Lys Asn Leu Ser Phe Pro Ser Ile Leu Ile Ser Phe Leu
64 1 5 10 15
66 Leu Val Leu Ile Leu Val Val Val Met Arg Leu Trp Lys Lys Gln Asn
67 20 25 30
69 Pro Pro Pro Gly Pro Trp Lys Phe Pro Ile Ile Gly Asn Leu Pro His
70 35 40 45
72 Leu Leu Leu Thr Ser Asp Leu Gly His Glu Arg Phe Arg Ala Leu Ala
73 50 55 60
75 Gln Ile Tyr Gly Pro Val Met Ser Leu Gln Ile Gly Gln Val Ser Ala
76 65 70 75 80
78 Val Val Ile Ser Ser Ala Glu Ala Ala Lys Glu Val Met Lys Thr Gln
79 85 90 95
81 Ala Asp Ala Phe Ala Gln Arg Pro Ile Val Leu Asp Ala Gln Ile Val
82 100 105 110
84 Phe Tyr Asn Arg Lys Asp Val Leu Phe Ala Ser Tyr Gly Asp His Trp
85 115 120 125
87 Arg Gln Met Lys Lys Ile Trp Ile Leu Glu Phe Leu Ser Ala Lys Lys
88 130 135 140
90 Val Gln Ser Ser Arg Leu Ile Arg Glu Glu Glu Met Glu Asp Ala Ile
91 145 150 155 160
93 Thr Phe Leu Arg Ser Lys Ala Gly Ser Pro Val Asn Ile Thr Lys Ile
94 165 170 175
96 Ile Tyr Gly Ile Ile Ile Ser Ile Met Ile Arg Thr Ser Val Gly Asn
97 180 185 190
99 Cys Lys Gln Lys Glu Arg Leu Leu Ser Val Ala Asp Ala Val Asn Glu
100 195 200 205
102 Ala Ala Thr Ser Phe Gly Thr Ala Asp Ala Phe Pro Thr Trp Lys Leu
103 210 215 220
105 Leu His Tyr Ile Ile Gly Ala Glu Ser Lys Pro Arg Arg Leu His Gln
106 225 230 235 240
108 Glu Ile Asp Asp Ile Leu Glu Glu Ile Leu Asn Glu His Lys Ala Asn
109 245 250 255
111 Lys Pro Phe Glu Ala Asp Asn Leu Met Asp Val Leu Leu Asn Leu Gln
112 260 265 270
114 Lys Asn Gly Asn Val Pro Val Pro Val Thr Asn Glu Ser Ile Lys Ala
115 275 280 285
117 Ser Val Leu Gln Met Phe Thr Ala Gly Ser Glu Thr Thr Ser Lys Ala
118 290 295 300
120 Thr Glu Trp Val Met Ala Glu Leu Met Lys Asn Pro Thr Glu Leu Arg
121 305 310 315 320
123 Lys Ala Gln Glu Glu Val Arg Gln Val Phe Gly Glu Met Gly Lys Val
124 325 330 335
126 Asp Glu Ser Arg Phe His Asp Leu Lys Phe Phe Lys Leu Val Val Lys

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002
TIME: 11:28:29

Input Set : A:\bbl465 us nacorrected seq lst.txt
Output Set: N:\CRF3\05222002\I909566B.raw

```
127                 340                 345                 350
129 Glu Thr Leu Arg Leu His Pro Pro Val Val Leu Ile Pro Arg Glu Cys
130         355                 360                 365
132 Arg Glu Thr Thr Arg Ile Asp Gly Tyr Glu Ile His Pro Asn Thr Arg
133     370                 375                 380
135 Ile Val Val Asn Ala Trp Ala Ile Gly Arg Asp Pro Asn Thr Trp Ser
136 385                 390                 395                 400
138 Glu Pro Gly Lys Phe Asn Pro Glu Arg Phe Lys Asp Cys Ala Ile Asp
139                 405                 410                 415
141 Tyr Lys Gly Thr Thr Phe Glu Leu Val Pro Phe Gly Ala Gly Lys Arg
142             420                 425                 430
144 Ile Cys Pro Gly Ile Thr Ser Ala Ile Thr Asn Leu Glu Tyr Val Ile
145         435                 440                 445
147 Ile Asn Leu Leu Tyr His Phe Asn Trp Glu Leu Ala Asp Gly Ile Thr
148     450                 455                 460
150 Pro Gln Thr Leu Asp Met Thr Glu Ala Ile Gly Gly Ala Leu Arg Lys
151 465                 470                 475                 480
153 Lys Ile Asp Leu Lys Leu Ile Pro Ile Pro Tyr Gln Val Ser Leu Gly
154                 485                 490                 495
156 Ser Asn Ile Ser
157             500
160 <210> SEQ ID NO: 3
161 <211> LENGTH: 502
162 <212> TYPE: PRT
163 <213> ORGANISM: Capsicum annuum
165 <400> SEQUENCE: 3
166 Met Glu Ile Gln Phe Thr Asn Leu Val Ala Phe Leu Leu Phe Leu Ser
167   1               5                  10                  15
169 Ser Ile Ile Leu Leu Leu Lys Lys Trp Lys Thr Gln Lys Leu Asn Leu
170              20                  25                  30
172 Pro Pro Gly Pro Trp Lys Leu Pro Phe Ile Gly Ser Leu His His Leu
173          35                  40                  45
175 Ala Val Ala Gly Pro Leu Pro His His Gly Leu Lys Asn Leu Ala Lys
176      50                  55                  60
178 Leu Tyr Gly Pro Leu Met His Leu Arg Leu Gly Glu Ile Pro Thr Val
179  65                  70                  75                  80
181 Ile Ile Ser Ser Pro Arg Met Ala Lys Glu Val Leu Lys Thr His Asp
182                  85                  90                  95
184 Leu Ala Phe Ala Thr Arg Pro Lys Leu Val Val Ala Asp Ile Val His
185             100                 105                 110
187 Tyr Asp Ser Thr Asp Ile Ala Phe Ser Pro Tyr Gly Glu Tyr Trp Arg
188         115                 120                 125
190 Gln Ile Arg Lys Ile Cys Ile Leu Glu Leu Leu Ser Ala Lys Met Val
191     130                 135                 140
193 Lys Phe Phe Ser Ser Ile Arg Gln Asp Glu Leu Ser Met Met Val Ser
194 145                 150                 155                 160
196 Ser Ile Arg Thr Met Pro Asn Phe Pro Val Asn Leu Thr Asp Lys Ile
197                 165                 170                 175
199 Phe Trp Phe Thr Ser Ser Val Thr Cys Arg Ser Ala Leu Gly Lys Ile
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002
TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq lst.txt
Output Set: N:\CRF3\05222002\I909566B.raw

```
                180                 185                 190
200 Cys Arg Asp Gln Asp Lys Leu Ile Ile Phe Met Arg Glu Ile Ile Ser
202         195                 200                 205
203 Leu Thr Gly Gly Phe Ser Ile Ala Asp Phe Phe Pro Thr Trp Lys Met
205     210                 215                 220
206 Leu His Asp Val Gly Gly Ser Lys Thr Arg Leu Leu Lys Ala His Arg
208 225                 230                 235                 240
209 Lys Ile Asp Glu Ile Leu Glu His Val Val Asn Glu His Lys Gln Asn
211                 245                 250                 255
212 Arg Ala Asp Gly Gln Lys Gly Asn Gly Glu Phe Gly Gly Glu Asp Leu
214             260                 265                 270
215 Ile Asp Val Leu Leu Arg Val Arg Glu Ser Gly Glu Val Gln Ile Ser
217         275                 280                 285
218 Ile Thr Asp Asp Asn Ile Lys Ser Ile Leu Val Asp Met Phe Ser Ala
220     290                 295                 300
221 Gly Ser Glu Thr Ser Ser Thr Thr Ile Ile Trp Ala Leu Ala Glu Met
223 305                 310                 315                 320
224 Met Lys Lys Pro Ser Val Leu Ala Lys Ala Gln Ala Glu Val Arg Gln
226                 325                 330                 335
227 Val Leu Lys Glu Lys Lys Gly Phe Gln Gln Ile Asp Leu Asp Glu Leu
229             340                 345                 350
230 Lys Tyr Leu Lys Leu Val Ile Lys Glu Thr Leu Arg Met His Pro Pro
232         355                 360                 365
233 Ile Pro Leu Leu Val Pro Arg Glu Cys Met Lys Asp Thr Lys Ile Asp
235     370                 375                 380
236 Gly Tyr Asn Ile Pro Phe Lys Thr Arg Val Ile Val Asn Ala Trp Ala
238 385                 390                 395                 400
239 Ile Gly Arg Asp Pro Glu Ser Trp Asp Asp Pro Glu Ser Phe Ser Pro
241                 405                 410                 415
242 Glu Arg Phe Glu Asn Ser Ser Val Asp Phe Leu Gly Ser His His Gln
244             420                 425                 430
245 Phe Ile Pro Phe Gly Ala Gly Arg Arg Ile Cys Pro Gly Met Leu Phe
247         435                 440                 445
248 Gly Leu Ala Asn Val Gly Gln Pro Leu Ala Gln Leu Leu Tyr His Phe
250     450                 455                 460
251 Asp Arg Lys Leu Pro Asn Gly Gln Ser His Glu Asn Leu Asp Met Thr
253 465                 470                 475                 480
254 Glu Ser Pro Gly Ile Ser Ala Thr Arg Lys Asp Asp Leu Val Leu Ile
256                 485                 490                 495
257 Ala Thr Pro Tyr Asp Pro
259             500
260 <210> SEQ ID NO: 4
263 <211> LENGTH: 51
264 <212> TYPE: DNA
265 <213> ORGANISM: artificial sequence
W--> 268 <220> FEATURE:
W--> 268 <223> OTHER INFORMATION:
268 <400> SEQUENCE: 4
269 tcaaggagaa aaaacccgg atccatggag cagaaaaatc tctcttttcc g          51
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002
TIME: 11:28:29

Input Set : A:\bb1465 us nacorrected seq lst.txt
Output Set: N:\CRF3\05222002\I909566B.raw

272 <210> SEQ ID NO: 5
273 <211> LENGTH: 35
274 <212> TYPE: DNA
275 <213> ORGANISM: artificial sequence
W--> 277 <220> FEATURE:
W--> 277 <223> OTHER INFORMATION:
277 <400> SEQUENCE: 5
278 ggccagtgaa ttgtaatacg actcactata gggcg 35
281 <210> SEQ ID NO: 6
282 <211> LENGTH: 35
283 <212> TYPE: DNA
284 <213> ORGANISM: artificial sequence
W--> 286 <220> FEATURE:
W--> 286 <223> OTHER INFORMATION:
286 <400> SEQUENCE: 6
287 gcggccgcga attcggaaaa tggagcagaa aaatc 35
290 <210> SEQ ID NO: 7
291 <211> LENGTH: 35
292 <212> TYPE: DNA
293 <213> ORGANISM: artificial sequence
W--> 295 <220> FEATURE:
W--> 295 <223> OTHER INFORMATION:
295 <400> SEQUENCE: 7
296 gcggccgcgg atccttagaa catcgttaat taaag 35

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 05/22/2002
PATENT APPLICATION: US/09/909,566B TIME: 11:28:30

Input Set : A:\bb1465 us nacorrected seq lst.txt
Output Set: N:\CRF3\05222002\I909566B.raw

Use of <220> Feature(NEW RULES):
Sequence(s)__are missing the <220> Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence"
or"Unknown". Please explain source of genetic material in <220> to <223>
section (See "Federal Register," 6/01/98, Vol. 63, No. 104,pp.29631-32)
(Sec.1.823 of new Rules)

Seq#:4,5,6,7

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/909,566B

DATE: 05/22/2002
TIME: 11:28:30

Input Set : A:\bb1465 us nacorrected seq lst.txt
Output Set: N:\CRF3\05222002\I909566B.raw

L:10 M:270 C: Current Application Number differs, Replaced Application Number
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:268 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:268 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:277 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:277 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:286 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:286 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:295 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:295 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION: